<u>Listing of Claims:</u>

In the Claims

1. (Currently amended) Method for constructing a 3D scene model by analyzing image sequences, each image corresponding to a viewpoint defined by its position and its orientation, [wherein it comprises] <u>comprising</u> the following steps:

[- calculation] <u>calculating</u>, for [an] <u>each</u> image, [of] a depth map corresponding to the depth, in 3D space, of [the] pixels of the image,

[- calculation] <u>calculating</u>, for [an] <u>each</u> image, [of] a resolution map corresponding to the 3D resolution of [the] <u>said</u> pixels of the image, from the depth map,

[-] matching [of] a pixel of a current image with a pixel of [another] <u>an</u> <u>other</u> image of the sequence, <u>said</u> pixels relating to one and the same point of the 3D scene, by projecting the pixel of the current image onto the other image,

[- selection of] <u>selecting</u> a pixel of the current image depending on its resolution and on that of the pixels of other images of the sequence matched with [this] <u>said</u> pixel, <u>and</u>

[- construction of the] <u>constructing a</u> 3D model from the selected pixels.

2. (Previously Presented) Method according to Claim I, wherein the selected pixels of an image constitute one or more regions, weights are calculated and allocated to the pixels of the image depending on whether or not they belong to the regions and on the geometrical characteristics of the regions to which they belong in the image and a new selection of the pixels is performed depending on the resolution and weight values assigned to the pixels.

3. (Previously Presented) Method [according to claim 2] <u>for constructing a 3D</u> <u>scene model by analyzing image sequences, each image corresponding to a</u> <u>viewpoint defined by its position and its orientation, comprising :</u>
<u>   calculation, for an image, of a depth map corresponding to the depth, in</u>

3D space, of the pixels of the image,

calculation, for an image, of a resolution map corresponding to the 3D resolution of the pixels of the image, from the depth map,

matching of a pixel of a current image with a pixel of another image of the sequence, pixels relating to one and the same point of the 3D scene, by projecting the pixel of the current image onto the other image,

selection of a pixel of the current image depending on its resolution and on that of the pixels of other images of the sequence matched with this pixel, and

construction of the 3D model from the selected pixels;

wherein the selected pixels of an image constitute one or more regions, weights are calculated and allocated to the pixels of the image depending on whether or not they belong to the regions and on the geometrical characteristics of the regions to which they belong in the image and a new selection of the pixels is performed depending on the resolution and weight values assigned to the pixels, and

wherein a relevance value is assigned to each pixel of an image depending on the weight and on the resolution which have been assigned to this pixel and a selection of the pixels of a current image is performed on the basis of the highest relevance value among the matched pixels in order to give a mask of selected pixels.

4. (Previously Presented) Method according to Claim I, wherein a partitioning of the images of the sequence is performed by identifying, for a current image, the images whose corresponding viewpoints have an observation field possessing an intersection with the observation field relating to the current image, so as to form a list of images associated therewith, and in that the images belonging to the list associated with the current image are images of the sequence that are to be used in the matching of the current frame's pixels.

5. (Previously Presented) Method according to Claim 4, wherein a partitioning of the images of the sequence is performed by removing, from the list

associated with an image, the images which possess too few pixels corresponding to those of the current image.

6. (Previously Presented) Method according to Claim 3, wherein the operations of calculating the weights, of calculating the relevance and of selecting the pixels are repeated until the masks obtained from the selection no longer change significantly .

7. (Previously Presented) Method according to Claim 3, wherein the operations of matching a pixel of the current image, by projection on the other images, are stopped for this pixel as soon as a corresponding pixel having a higher relevance value has been found.

8. (Previously Presented) Method according to Claim 3, wherein the selection on the basis of the relevance values is performed when the ratio of the resolution values of the matched pixels lies within predefined limits.

9. (Previously Presented) Method according to Claim I, wherein the pixel of the other image is the pixel closest to the projection point on this other image.

10. (Previously Presented) Method according to Claim I, wherein the moving objects which move in the scene are detected in order to be extracted therefrom so as to obtain a static-type scene.

11. (Previously Presented) Method according to claim 1, further comprising the step of navigating in a 3D scene by creating images as a function of the movement of the viewpoint, wherein the images are of different viewpoints of the 3D model.